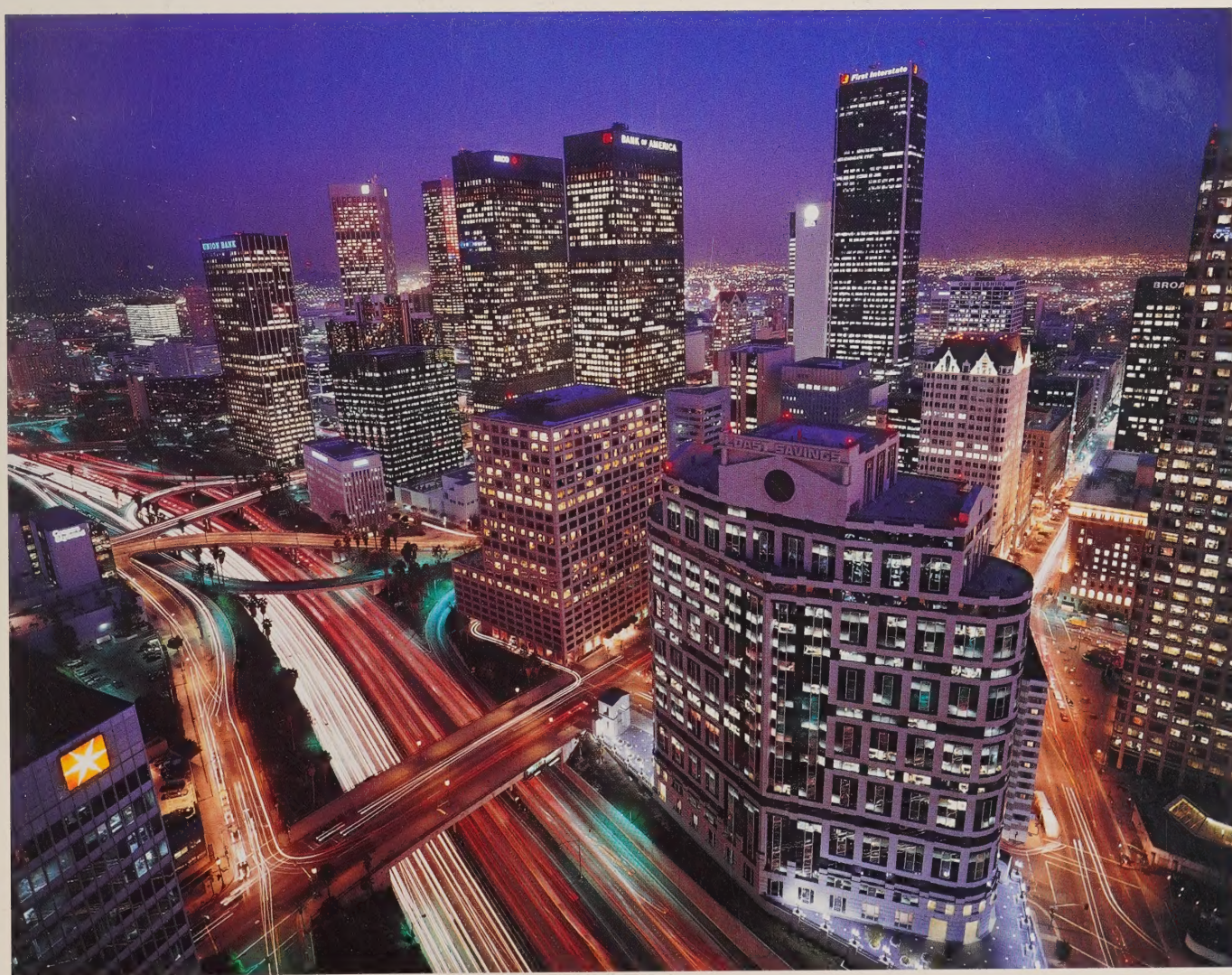


L O S A N G E L E S



DEPARTMENT *of*
WATER AND POWER





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The Los Angeles Department of Water and Power (DWP), established at the beginning of the century, is the largest municipally-owned utility in the nation. It exists under and by virtue of the Charter of the City of Los Angeles enacted in 1925.

With a work force in excess of 11,000, the DWP provides water and electricity to some 3.5 million residents and businesses in a 464-square-mile area.

DWP's operations are financed solely by the sale of water and electric services. Capital funds are raised through the sale of bonds. No tax support is received.

A five-member Board of Water and Power Commissioners establishes policy for the DWP. The Board members are appointed by the Mayor and confirmed by the City Council for five-year terms.

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UNIVERSITY OF CALIFORNIA

There is no doubting the importance of the delivery of water to this semi-arid area. In fact, the growth of Los Angeles is intricately linked to the history of the DWP.

The Department of Water and Power began with the establishment of the first Los Angeles municipal water works system in 1902. Before then, water from the Los Angeles River was distributed to the pueblo of Los Angeles, founded in 1781, through a system of crude dams, water wheels and ditches (called "zanjas"). This "zanja" system continued in operation until 1903.

The population of Los Angeles leaped from 5,728 in 1870 to 102,479 by 1900. Along with inherent growth problems, the city faced a serious water shortage.

The new municipal Water Department, under the leadership of William Mulholland, its first superintendent and chief engineer, began enlarging the Los Angeles River system. Greater storage capacity was provided to conserve a large portion of the river's flow. Construction of new reservoirs and distribution mains provided added capacity and efficiency for the system. Conservation efforts were initiated at this early date with the installation of meters to discourage wasteful use of water.

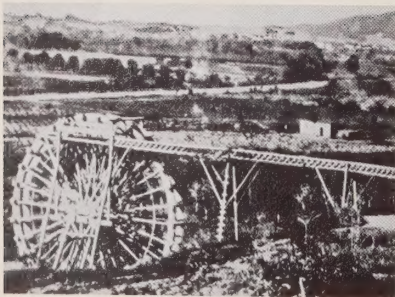
A man of vision, Mulholland met the challenge of fulfilling the

water needs of the thirsty, growing city by looking north. His revolutionary plan was to bring water to Los Angeles from the vast watershed of the eastern Sierra Nevada.

That plan was met with support by the citizens who, in 1905, voted a bond issue of \$1.5 million to purchase Owens Valley lands and water rights. Two years later, another bond issue of \$23 million was approved by the voters for construction of a 233-mile-long aqueduct.

Mulholland's dream was realized in 1913 when water from the eastern Sierra was first delivered to the city. It was regarded as a miracle of engineering because the water flowed by gravity from the Owens Valley to Los Angeles. The aqueduct did more than just supply water to the city, which

has continued to grow rapidly ever since. It also brought power to Los Angeles.



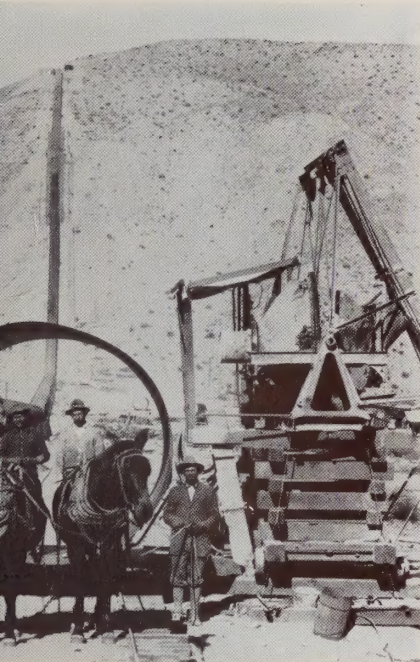
During the building of the aqueduct, the Water Department saw an opportunity to use water to generate power. In 1906, Ezra F. Scattergood was commissioned as consulting engineer to devise a means of developing hydroelectric power along the route of the aqueduct. Scattergood became Mulholland's counterpart for the Power System, and was the driving spirit in the development of the municipal electric system.

The city's first power plant was built in 1908 at Division Creek in the Owens Valley. It generated power from the water for the purpose of constructing the aqueduct. This was the first time that electric energy had been used in such a construction project.

The Bureau of Los Angeles Aqueduct Power was established in 1909. Scattergood was appointed its chief electrical engineer. Preliminary engineering work began for the siting of new hydro generating stations along the aqueduct.

At the end of the first decade of the century, the groundwork had been set and the plans were in motion to provide ample supplies of water and electricity to the residents of Los Angeles whose numbers had tripled from 102,479 in 1900 to 319,198 in 1910.

The first power pole in Los Angeles was set in 1916. After San Francisco Power Plant 1, north of Los Angeles, was placed in service in 1917, energy was delivered over a new transmission line. This was the beginning of distribution of municipally-generated electricity in Los Angeles.



The development of water and energy supplies for Los Angeles is tied closely with the city's history.



WATER SYSTEM

San Francisco

California
Aqueduct
(State Water Project)

Los Angeles
Owens River
Aqueduct System

Los Angeles
Area

Colorado River
Aqueduct

The DWP delivers water to nearly 640,000 customers in Los Angeles. The average daily demand is 580 million gallons. Water consumption rates

for the city result in an average daily consumption of 188.6 gallons per person. The water consumption rate is increasing only 1 to 1.5 percent per year. The rate is not expected to change in the foreseeable future.

In addition, the DWP supplies water to some 53,000 fire hydrants in the city, and provides water for irrigation and recreational purposes.



f all the major cities of the world, Los Angeles has one of the most complex systems to collect and distribute water to its citizens. The water is transported over long distances, and is distributed over a larger, more varying geographical area than any other major city in the United States.

To meet the needs of its consumers, the DWP provides water from three sources of supply. In an average year, 75 percent of the water comes from the eastern Sierra; wells in the San Fernando Valley and other local groundwater basins supply 15 percent; and purchases from the Metropolitan Water District of Southern California (MWD) provide the remaining 10

percent. During drought years, MWD purchases are increased substantially.



Eastern sierra
snow melt provides
most of Los
Angeles' water.



Los Angeles Aqueduct System brings supplies from the eastern sierra watershed.

The Los Angeles Aqueduct System

The 233-mile aqueduct was completed in 1913. In 1940, the aqueduct was extended 105 miles north to tap the waters of the Mono Basin.

The Mono Basin project extended the length of the Los Angeles Aqueduct system to 338 miles, and brought the capacity of the system to about 300 million gallons per day.

In the late 1950s and early 1960s, the DWP saw a need to obtain additional supplies of water from the eastern Sierra

watershed to meet the needs of the growing city.

To supplement the original aqueduct, the Second Los Angeles Aqueduct was completed in 1970. The new aqueduct increased system capacity by 50 percent. Together, both aqueducts deliver an average of 430 million gallons of water per day to the city.

Due to gravity flow, the aqueduct system provides the opportunity to produce low-cost hydroelectric energy at 11 power plants along the route. The result is a net gain of 1.12 billion kilowatt hours of air pollution-free hydroelectric power. This

is equivalent to the energy produced by the burning of 4,900 barrels of fuel oil each day, and can supply the needs of 220,000 homes.

Groundwater

The major portion of the city's groundwater supply comes from the San Fernando Valley Groundwater Basin. It is a natural underground reservoir that provides water to approximately 500,000 Los Angeles residents in the metropolitan area.

In addition to supplying the annual water



Spreading grounds help to store water in the underground basin.

needs, this groundwater basin holds large quantities of stored water which can be extracted during droughts and replenished during years of surplus water supply. Enough well capacity and stored water are available in the basin to supply about one million people for two years in a drought.

The groundwater basins are replenished mostly from rain water

that filters down to the underground basin. Spreading grounds are used to allow additional rain water from the Los Angeles River and local creeks and surplus Los Angeles Aqueduct water to percolate into the groundwater basin.



Metropolitan Water District

Metropolitan Water District of Southern California (MWD) supplies water from the Colorado River and the State Water Project, on a wholesale basis, to Los Angeles and its other member agencies.

Because this water must be pumped along these aqueduct routes,

Thousands of water quality tests are made each year.

MWD supplies are more costly and rely more heavily on energy than the city's other water supplies.

MWD, which usually accounts for about 10 percent of the city's needs, is relied upon heavily in times of drought, accounting for as much as 60 percent of the city's total water supply.

Water Quality

Los Angeles water consistently meets all federal and state water quality standards. It is not only safe, but is one of the best tasting municipal water supplies in the nation.

The DWP continually monitors the purity and quality of the water supply

Los Angeles Aqueduct Filtration Plant treats up to 600 million gallons of water a day.



in order to assure the delivery of clean, safe drinking water. More than 60,000 laboratory and field analyses are made each year. About 15,000 of these tests are for bacteriological control, and the remainder are for chemical, physical, and radiological inspections.

Small quantities of fine, dust-like particles which cause water to appear cloudy is called "turbidity." To reduce turbidity in the aqueduct water, in 1986, the DWP completed and placed into service a \$146 million filtration plant. It is one of the largest and most advanced water treatment facilities in the world. Situated at the terminal



The North Hollywood Groundwater Treatment Facility helps to cleanup the San Fernando Valley Groundwater Basin.

end of the aqueduct system in Los Angeles' San Fernando Valley, the plant uses ozone and deep bed filters to treat up to 600 million gallons of water each day.

The DWP's ground-

water supply is generally of very good quality, being free of bacteriological contaminants and turbidity. In 1980, trace amounts of organic solvents were discovered in some of the well water taken from the San Fernando Valley Basin. The contamination is believed to be the result of improper disposal of chemicals by industry over a period of several decades. The concentrations of the contaminants in certain areas of the valley have caused some wells to be removed from service. Other wells have been blended with aqueduct supplies to bring the water to within state guidelines.

The DWP and other local agencies have conducted studies to determine the extent of the contamination in the Valley Basin. The DWP and the U.S. Environmental Protection Agency (EPA) are jointly investigating measures to clean up the basin and protect against further degradation of the underground supply.

A comprehensive program, involving an advanced-technology aeration facility, is in effect to remove the contaminants from the water and prevent them from spreading to more wells.

The DWP is working to cover many of its small reservoirs or replace them with tanks to prevent harmless algae growths which may impart a taste or odor to the water. This is being done to meet State Department of Health Services recommendations.



Water Storage

Water demands vary with the time of day and with changing weather conditions. Maintaining a sufficient flow of water at adequate pressure under varying demand conditions requires the storage of water.

Water is stored in seven major reservoirs along the Los Angeles Owens River Aqueduct route and

in five large reservoirs within the city. The Water System maintains more than 100 storage facilities, ranging from large open reservoirs to small steel or concrete storage tanks.

Storage tank capacities vary from 10,000 to 10 million gallons. Combined storage capacities of all reservoirs and tanks is about 365,000 acre-feet, or approximately 120 billion gallons.

Water Distribution

The DWP installs and maintains water mains and fire hydrants year round to meet the city's demands for water. Water is distributed to nearly 640,000 customer service connections through more than 7,000 miles of water mains, ranging from 4 inches to 10 feet in diameter. Because of the unusual range in elevation (sea level to 2,400 feet),

the city's area has been divided into 102 pressure zones. Most of the 85 booster pumping stations are designed to provide water service at elevations higher than the gravity system can supply.

Several programs are underway to upgrade the water distribution system. Aging pipes and system components are being replaced, and cleaning and cement-mortar lining of older pipelines have been increased dramatically. Pipeline flushing is eliminating accumulated sediment thereby improving the efficiency of the delivery system. The operation of the system is being computerized to allow for better monitoring and control of the numerous Water System facilities.



Hollywood Reservoir is one of several in-city water storage facilities.



Griffith Park golf courses use reclaimed water.



The Donald C. Tillman Water Reclamation Plant treats wastewater which can be used for landscape irrigation.

Water Reclamation

DWP actively promotes the use of highly-treated wastewater as an alternate source of water for irrigation and industrial users.

The Los Angeles Department of Public Works operates the Donald C. Tillman Water

Reclamation Plant in the San Fernando Valley and the jointly-owned Los Angeles-Glendale Water Reclamation Plant in the Griffith Park area. The plants were constructed to reduce the overload on the city's sewage system. They produce large volumes of reusable-quality water for irrigating large turf areas such as golf courses, cemeteries, free-way landscaping and

parks. The DWP is responsible for providing the connection to the customer. Increases in water reuse will offset the quantities of water that DWP must purchase or import.





Water conservation remains important in Los Angeles.



Exhibits on water conservation help raise public awareness of the problems.

Water Conservation

DWP is taking an active role in promoting the efficient use of the city's valuable water resources. Conservation programs aimed at reducing both indoor and outdoor water use have been developed to encourage residents, businesses, and industries to save water and comply with city ordinances.

Water surveys and consultations are provided to commercial and industrial users free of charge. Audits are also provided to managers of parks and other large turf properties to recommend ways to optimize watering practices. Free water conservation kits, containing low-flow showerheads, water displacement bags and dye tablets, have been provided to residential customers upon request. A number of other guides and pamphlets on water saving tips are also available to customers.

To encourage water conservation, DWP initiated a seasonal pricing structure in 1986 which established two different commodity charges based



on time of year. Water rates during the months of April through September are higher than those in the winter.

A special educational series is provided to local schools to teach the importance of water conservation.

Challenges for the Future

As the population of Los Angeles increases, so will its water consumption. To continue to meet the



Conservation measures for large turf areas save water.

needs of the city, the DWP may have to purchase more water from MWD.

Currently, lawsuits threaten L.A.'s water supply from the Mono Basin. The DWP continues to challenge these lawsuits to maintain its water rights in this region. These contentions point even more to the need for customers to conserve water.

Another of the Water System's tasks for the future is to improve and maintain the city's water supply. With the filtration plant and other programs already in operation, the

DWP can augment this effort with aeration facilities and by covering more reservoirs.

The DWP is at the forefront of technology in the area of removing contaminants from water. In conjunction with the EPA, the DWP is finding innovative methods of cleaning up groundwater. Among them is an experiment conducted at the University of California at Los Angeles, on using oxidation processes as a disinfectant.



Conserving water today will ensure adequate supplies for future generations.

POWER SYSTEM



The City Power System, which began in 1917, had become the sole general distributor of electric energy for Los Angeles by 1939.

By 1940, the once-sleepy pueblo had grown to a metropolis of 1.5 million people that provided 41 percent of the state's employment. World War II turned the city into one of the nation's top war production centers, ushering in three decades of explosive population growth and unprecedented economic diversification.

By the early 1970s, oil and natural gas were sup-

plying about 80 percent of the energy for generating DWP electricity. But factors such as the OPEC oil

embargo of 1973 and air quality standards in the city caused a change.

As a result, the DWP

launched a program of energy resource diversification that has substantially reduced the percentage of DWP electricity generated from petroleum while boosting the share produced from other fuels.

Coal is now the largest single source of power supply in Los Angeles at 45 percent. Oil and natural gas now supply about 20 percent of the city's energy; hydroelectricity accounts for 12 percent; nuclear, 9 percent; and the remainder comes from purchased power.

The DWP supplies more than 20 million megawatt (mw) hours of electricity a year for the city's 1.36 million cus-



Hoover Dam has provided power to Los Angeles for more than 50 years.

tomers. (One megawatt equals one million watts.) The average resident uses about 5,000 kilowatt-hours of electricity per year. (A kilowatt hour is equivalent to a 100-watt light bulb operating for 10 hours.)

Business and industry consume about 70 percent of the electricity in Los Angeles, but residences constitute the largest number of customers. In addition to serving these consumers, the DWP lights public streets and highways, powers the city's water system and sells electricity to other utilities.

Hydroelectric Generation

Hydroelectric power has been a big part of the city's energy mix for many years. Hoover Dam, one of the world's engineering marvels, was the first public works project to bring hydroelectric power to the area on a grand scale. The DWP was a prime mover in a long struggle to gain federal approval for this massive undertaking that combined the benefits of flood control, water supply and power generation.

From the beginning of its operation in 1936 until



*Pumped-storage
Castaic
Hydroelectric
Power Plant.*

1986, the DWP was under contract with the Bureau of Reclamation, U.S. Department of Interior, to operate 13 of the plant's generating units to supply power for municipalities and public agencies in Southern California and for the states of Arizona and Nevada.

Until 1942 Hoover Dam was the main source of power for Los Angeles, generating as much as 75 percent of the city's needs. The power is brought to Los Angeles over a 266-mile transmission line. By 1987, Hoover Dam supplied only 5 percent of the city's electricity.



Los Angeles celebrates arrival of Hoover power in 1936.

Recognizing the advantages of hydroelectric power, the DWP in 1972 harnessed the energy of another great water system — the California State

Aqueduct. Twenty-two miles north of the Los Angeles city limits, the Castaic Power Plant uses water from the west branch of the aqueduct to generate up to 1,247 mw of power during peak-use hours. The city's peak requirements range from three to six hours a day in winter and from six to 10

hours a day in summer, depending on weather conditions.

Los Angeles Aqueduct generating stations — including San Francisco and new facilities — are also vital to the city's power supply, producing about 5 percent of its hydroelectricity. In addition to this production, the DWP purchases hydroelectricity from other producers, mainly the federal Columbia River Power System.

Oil and Natural Gas

In contrast to the 1970s, energy from oil and gas now provide only one fifth of the city's electricity. The DWP has four facilities in

the Los Angeles basin that burn these fossil fuels to produce steam for generating electricity. The largest is Haynes Generating Station in Long Beach, with a total net capability of 1,570 mw.

Other steam-electric power plants are Valley (517 mw), Harbor (499 mw) and Scattergood (716 mw). Scattergood Generating Station also burns methane gas from the adjacent Hyperion Sewage Treatment Plant, while Valley Generating Station can burn gas reclaimed from nearby landfills.



Intermountain Generating Station in Utah burns coal to provide power to Los Angeles.

Coal Fueled Generation

Coal, which is plentiful and relatively inexpensive, has become the most important fuel in the DWP energy portfolio, furnishing 45 percent of the city's power. Coal gained a foothold as the major power source for Los Angeles in 1987 with the completion of the \$5.5 billion, 1600-megawatt Intermountain Power Project (IPP) in Utah.

The DWP, manager in charge of design, construction and operation, is the largest buyer of power, initially purchasing more than 62 percent of the output. As other project participants exercise their options on IPP's produc-

tion, DWP's share will decline to 45 percent, or 714 mw.

The DWP also receives about a fifth of its power production from its 22 percent ownership in each of two coal-fired plants in the Southwest: the 1,580-mw Mohave Generating Station below Davis Dam on the Colorado River in southern Nevada and the 2,250-mw Navajo Generating Station near Page, Arizona.

Nuclear

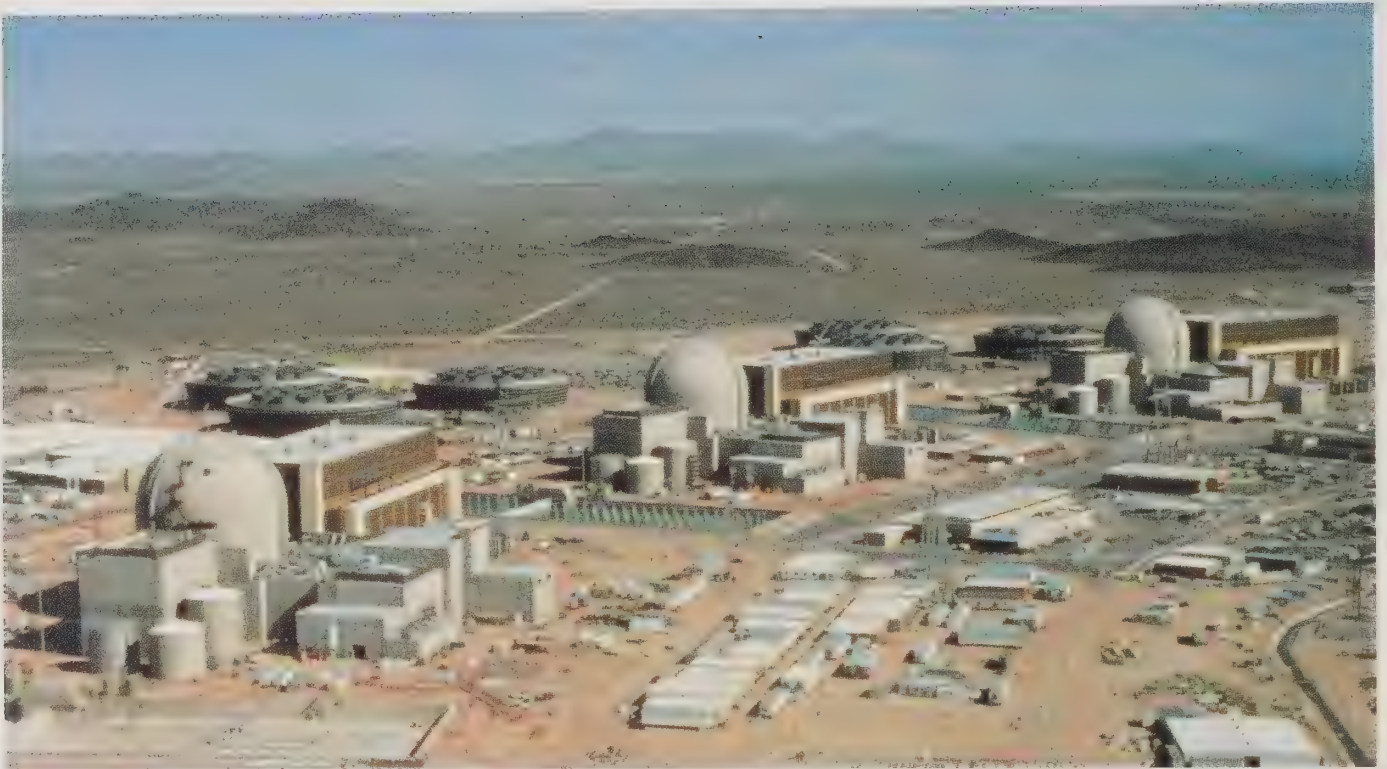
Energy from the atom has been used commercially to produce electricity in the United States since 1957 but it only became part of the DWP's energy mix in 1986, with the



startup of Arizona's Palo Verde Nuclear Generating Station near Phoenix. This facility, which supplies about 9 percent of the electricity for DWP customers, is designed to generate 3,810 mw—the largest output of all 95 commercial nuclear power plants now operating in the United States.

Palo Verde Nuclear Generating Station is the largest DWP power facility in the Los Angeles Basin.





Los Angeles receives power from the Palo Verde Nuclear Generating Station near Phoenix, Arizona.

Participation in the Palo Verde project, as well as in three Southwestern coal-fired plants, is indicative of the DWP's strategy to acquire new sources of power outside the Los Angeles Basin as a means of improving local air quality. These projects also offer a safe, cost-effective alternative to oil- and gas-generated power.



Sylmar Converter Station is the terminus for the 845-mile Pacific Intertie.

Transmitting and Distributing Power

Electricity from the generators makes its first journey on a “bus.” That’s the name given to the electrical conductor that sends the power from the generating station to a transformer, where voltage is increased to facilitate long-distance transmission to receiving stations. High voltage is used to propel large amounts of electrical energy efficiently over long distances.

Thousands of miles of transmission lines, both direct and alternating current, feed electricity from the Pacific Northwest and Southwestern United States into Los Angeles’ 19 receiving stations — all designed for handling large quantities of bulk power. The stations have multiple transmission links with each other and with different power generating plants, assuring that if any one major element of the system “goes down,” others can take over its load.



Power is then transmitted to more than 150 distributing stations at 34,500 volts. Transformers at each distributing station reduce the voltage to 4,800 volts for neighborhood distribution.

Many large users of power are served directly from the receiving stations, thus eliminating the need for a distributing station. Transformers at these DWP-run “customer stations” then reduce voltage to usable levels for that facility.

Neighborhood distributing stations are built to blend with the surrounding community.

The Energy Control Center uses advanced technology to monitor the Power System.



Underground and overhead conductors crisscross neighborhoods to carry the power to customers. Before electric current reaches a customer, another set of transformers reduces the voltage to desired levels for residences and industry.

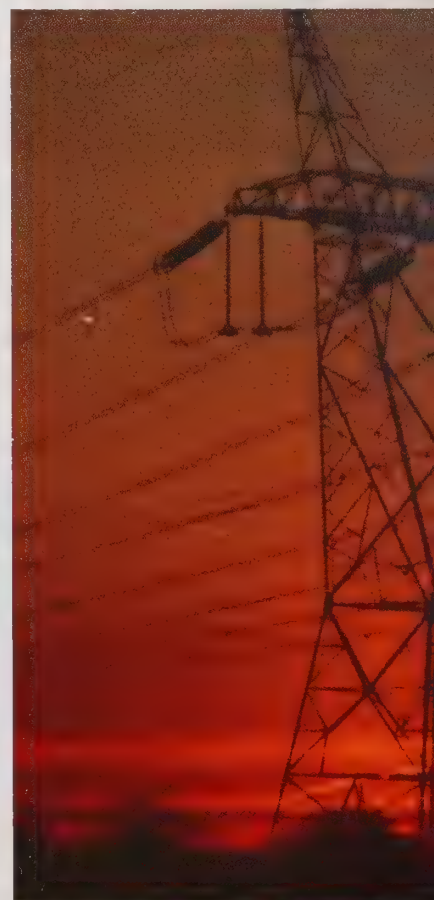
Keeping Tabs on the System

The flow of electricity through the massive Los Angeles power system grid

must be closely regulated to avoid surges or drops in power levels. This task falls largely to computers at the DWP's technologically-advanced Energy Control Center (ECC).

The center receives signals around the clock via microwave and telephone from generating plants and power stations. Control computers continuously balance total power generation with changing customer load requirements.

Sophisticated computer programs aid in managing load flows, diagnosing problems, promoting efficiency and maintaining the security of the power network. Computers also facilitate constant communication with other utility control centers in the western United States.



Challenges for the Future

As the 20th century draws to a close, a broad range of options will be pursued to meet the demand for power in the next century. Besides the variety of energy sources already being tapped, the DWP is looking at such alternatives as geothermal, solar, wind and biomass, as well as at other emerging technologies.

At the dawn of the 21st century, the demand for power during peak hours may reach 6,326 mw of electricity—the equiva-

lent needed for 6.3 million homes and the same amount the whole state of California required in 1970. Demand growth in this city of 3.5 million people will represent an increase of more than 25 percent over today's peak-load needs.

Coal will probably still be king when the next century begins. Hydroelectric power is also apt to remain important. And while oil will account for only a small portion of the DWP's energy mix in the next century, natural gas, a relatively nonpolluting fossil fuel, is likely to

make a sizable contribution.

Rate structures and financing, economic shifts, environmental constraints, regulatory policies for utilities, technological breakthroughs and innovations in transportation are other variables that could sharply alter the city's energy future.



Energy Efficiency

One of the toughest tests for a utility like the DWP is meeting peak demand. While energy requirements drop sharply after bedtime each night, they soar in late afternoon when air conditioners, television sets and appliances go on.

Energy efficiency will continue to be emphasized in the coming years. Although many of the savings have already been realized through changes in lifestyle, equipment modifications can result in further savings — especially in the commercial sector.

To promote energy efficiency, the DWP conducts surveys for its residential, commercial and industrial customers.

For commercial and industrial customers, the DWP encourages efficient energy management through its incentive programs for the use of heat pumps, thermal energy storage and lighting efficiency.

Paying for Water and Power Services

The DWP places no tax burden on the city. The daily operation and maintenance of the Water and Power Systems are paid

from current revenues generated from water and power sales. The systems' construction projects are financed through revenues and bonds that are repaid through earnings over long periods of time.

Water and electric rates are fixed by the Board of Water and Power Commissioners, subject to approval by the City Council and the Mayor.

As the DWP's goal is to provide quality service at the lowest possible rates, DWP water and electric rates compare favorably with other large American cities.

Payments may be made by mail, or in person at any DWP commercial office, or at an authorized payment agency. Customer service represen-

tatives are available to answer any questions, and respond to any problems, concerning DWP bills. Customers having difficulty paying their bills are encouraged to call Customer Services before the DWP starts collection action.

The DWP allows customers approximately six weeks to pay their bill before the service is subject to disconnection. During the six-week period, the DWP will accept installment payments.



*Conservation
audits help home-
owners save water.*



Project ANGEL helps customers needing assistance in paying their water and electric bills.

Special Rates

The DWP offers special “Lifeline” rates for low-income senior citizens or persons granted a disability exemption by the State of California, and special rates for low-income customers. Discounts are also available to customers who have life-support, paraplegic, quadriplegic, or multiple sclerosis patients as full-time residents.

Project ANGEL (Assist Neighbors by Giving Energy for Living) is a program to help customers pay their water and electric bill. These customers may include those who meet the economic guidelines for the program, those on disability or other fixed income, senior citizens, disabled persons and “special hardship” cases. It is specially designed for those

not eligible for other aid or welfare assistance, and is administered by the United Way. Funding for the project is from contributions from DWP customers and city employees.

Information on special rates is available through DWP Customer Services.



Water Conservation Gardens contest increase awareness of drought-tolerant plants for the home.

Services to Customers

In addition to offering special rates, the DWP provides a number of services to its customers. Using special teletype equipment, the DWP can communicate with speech- and hearing-impaired customers. Customers with a teletype device hook-up may call the DWP to

type a message and receive assistance regarding water and electric service.

Conservation counselors, auditors and information are available to help consumers save water and electricity, thereby reducing their utility bills. Calls can be made to the DWP HOTLINE.

The DWP offers low- and no-interest loans to qualifying residential customers for the installation of water and energy saving appliances and devices.

To reduce the instances of power outages, the

DWP aggressively pursues a tree-trimming project within the city.

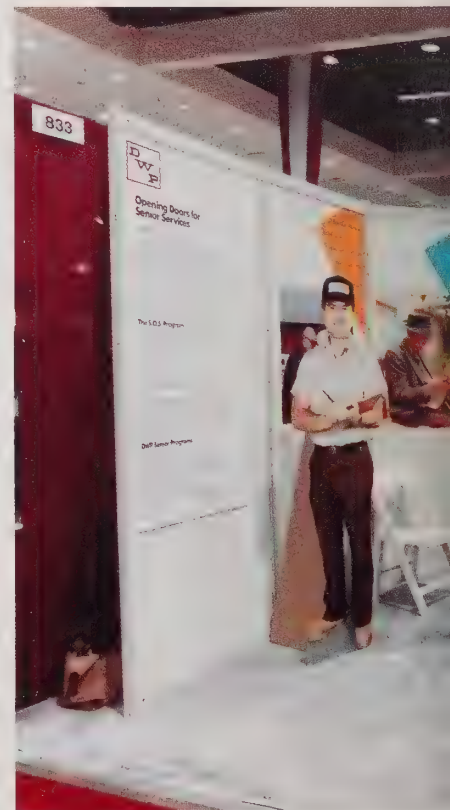
When there are power outages or other emergencies, the DWP is able to rapidly respond through the use of the Trouble Computer System.

Services to the Community

Establishing and maintaining a good relationship with the community it serves is an important part of the DWP's operations. A community outreach program provides two-way communication between the DWP and key

business and association contacts. The DWP sponsors special community events, provides community exhibits, offers tours of DWP facilities to community groups and makes its facilities available for community meetings. A Speakers Bureau sends DWP representatives to address groups on a number of issues.

To reach tomorrow's leaders and customers, the DWP goes into the schools, bringing literature and conducting a number of educational programs for teachers and students. An electric safety program is given at schools upon request, and other programs are con-





*Tree trimmers
prune branches to
help prevent power
outages.*

*Working with
schools, DWP
helps give students
a basic under-
standing of water
and energy.*



*DWP participates
in community
events such as this
one for seniors.*

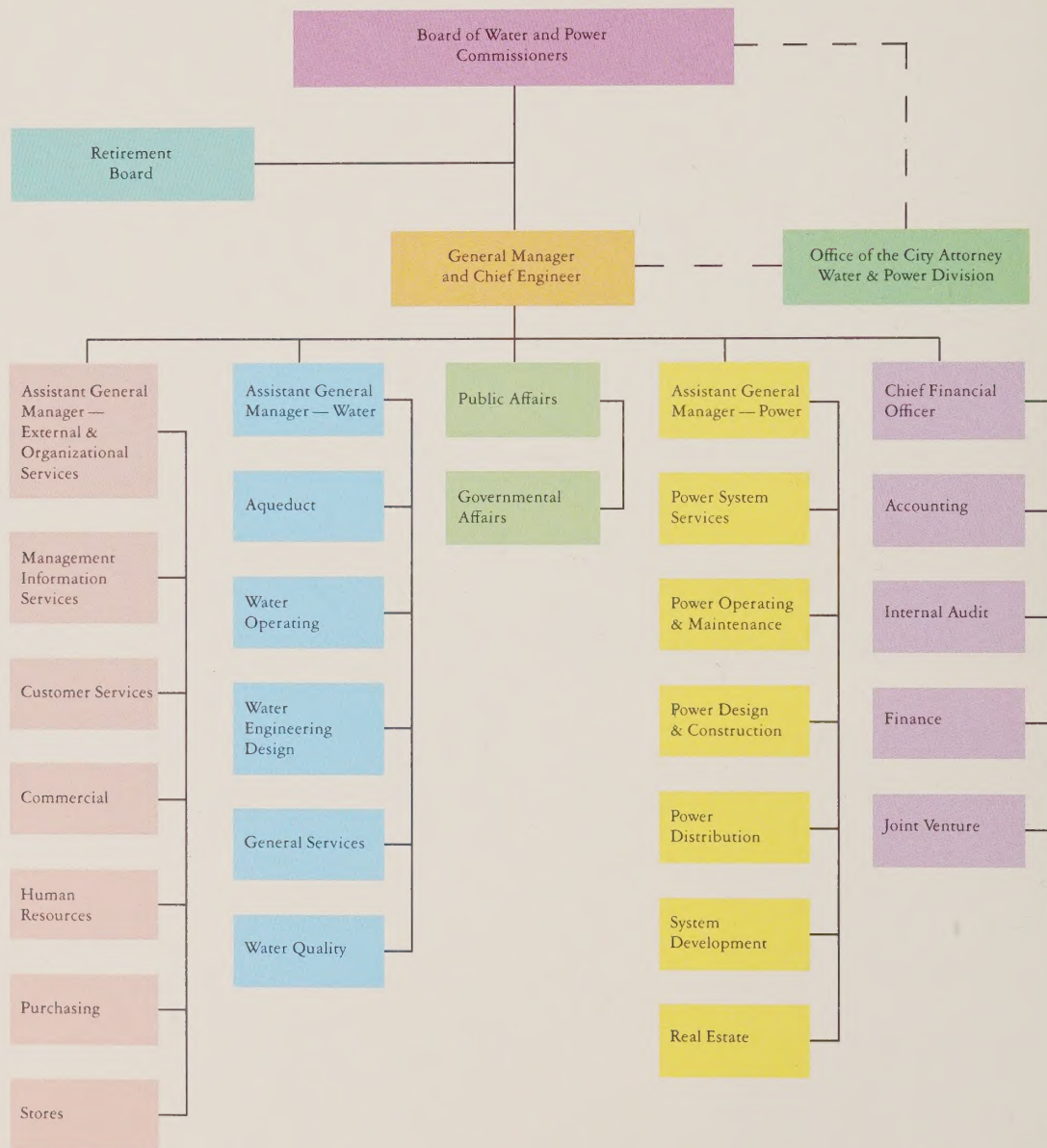
tinually being developed.

Taking its affirmative action/equal opportunity hiring one step further, the DWP established the Minority-Women Business Enterprise (MBE/WBE) program. While the DWP has always encouraged minority- and women-owned firms to apply for contracts, the Board of DWP Commissioners has set specific

goals in this area since the MBE/WBE program was established. The DWP aims to expend 12 percent of total contractual dollars each year for minority-owned businesses and 4 percent for women-owned businesses.



Department of Water and Power Organization





CELILLO DC-AC
CONVERTER STATION

OREGON

CALIFORNIA

NEVADA

UTAH

ARIZONA

PACIFIC HVDC INTERTIE
TRANSMISSION LINE

INTERMOUNTAIN
POWER PROJECT

LOS ANGELES
OWENS RIVER
AQUEDUCT
SYSTEM

CALIFORNIA
AQUEDUCT
(State Water
Project)

OWENS
GORGE
POWER
PLANTS

OWENS
GORGE
TRANSMISSION
LINE

McCULLOUGH
SWITCHING
STATION

EL DORADO
SUB-STATION

HOOVER DAM
POWER PLANT

MEAD SWITCHING
STATION

MOHAVE
GENERATING
STATION

COLORADO RIVER
AQUEDUCT

NAVAJO
GENERATING
STATION

SYLMAR DC-AC
CONVERTER
STATION

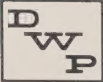
CASTAIC
POWER PLANT

Los Angeles
Area:

- ▲ Valley Generating Station
- ▲ Scattergood Generating Station
- ▲ Haynes Generating Station
- ▲ Harbor Generating Station

PALO VERDE
GENERATING STATION

Phoenix
Area

Your Los Angeles  Department of Water and Power